

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF NORTH CAROLINA
WESTERN DIVISION

No. 5:22-CV-015-FL

ROBERT TERRACINO and
BRADIE TERRACINO,

Plaintiffs,

v.

TRIMACO, INC., f/k/a/ TRIMACO, LLC;
CHARLES COBAUGH; and DAVID C.
MAY,

Defendants.

ORDER

This patent case comes before the court pursuant to Markman v. Westview Instruments, Inc., 517 U.S. 370 (1996), for claim construction, with benefit of the parties' written submissions, including their joint claim construction statement with proposed constructions of the disputed claim terms, claim construction briefs, and responses and replies thereto, and hearing thereon February 1, 2024. Also pending is plaintiffs' motion to strike defendants' supplement filed after claim construction hearing, expanding upon an opinion made reference to in argument. (DE 66). Rendered here is the court's decision on the parties' disputed claim terms and on plaintiffs' motion to strike, which is denied. Issues bearing on the case schedule also are addressed.

BACKGROUND

Plaintiffs commenced this action January 1, 2022, and filed amended complaint April 18, 2022, seeking compensatory and punitive treble damages, and attorneys' fees. (See DE 1, 17).¹ Defendants moved to dismiss and for a more definite statement May 9, 2022. The court granted that motion in part and dismissed it in part, dismissing plaintiffs' claims for fraudulent inducement, breach of contract, unconscionability, and violations of the Federal Defend Trade Secrets Act, 18 U.S.C. §§ 1831 et seq., and the North Carolina Unfair and Deceptive Trade Practices Act, N.C.G.S. §§ 75-1.1, et seq., and allowing plaintiffs' claim for patent infringement to proceed.

Plaintiffs assert that defendants, a company and its co-owners, have infringed their patent numbered 9,044,917 ("the '917 patent"). Plaintiffs' patent describes a layered, high-friction drop cloth ("drop cloth") that protects both painters, by minimizing the risk that they will lose their footing on uneven surfaces like stairs and airplane wings, and the floor or other surface on which the painters stand, by absorbing paint that might otherwise drip onto areas not meant to be painted. (See compl. ¶¶ 15-16). Plaintiffs' invention is, in essence, a two-layered drop cloth with an absorbent canvas upper layer stitched to "a bumpy[,] sticky" lower layer. (Tr. (DE 64) at 10).

The parties dispute the following claim terms: "a non-skid protective cloth or pad, consisting of;" "adjacent;" "said downward projecting bumps comprising bumps having at least two different circumferential sizes;" "amorphous;" "said height of bumps having the smaller of said at least two different circumferential sizes being greater than said height of said larger of said at least two circumferential sizes;" "whereby when tested in accordance with TAPPI T548 specification, an average slide angle is no less than approximately 40 degrees;" and "whereby when said lower major surface of said single resilient layer is placed on a support surface, a Sliding

¹ Hereinafter, references to the complaint ("compl.") are to the operative first amended complaint at DE 17.

Coefficient of friction measure in accordance with TAPPI T548 specification is greater than approximately 0.75.” (DE 47 at 2-4).

DISCUSSION

At the onset, the court takes up the motion to strike, and following that, claim construction. Finally, the court addresses issues bearing on the case schedule below.

A. Plaintiffs’ Motion to Strike

The court accepted at hearing from plaintiffs a copy of U.S. Patent No. 10,683,607 B2, which lists defendant David C. May as an inventor and defendant Trimaco, Inc. as assignee, which had not been discussed in the parties’ briefs. (Tr. (DE 64) at 62-63). Defendants were given the opportunity to submit an addendum to their brief responsive to plaintiffs’ arguments regarding this patent, and they did so. Plaintiffs responded in accordance with direction given at hearing by the court. (Id. at 68).

Defendants responded again with a short answer to the court’s question at hearing regarding the procedural posture of a case from which its counsel quoted. (DE 65) (“The contested response”). Plaintiffs filed the instant motion to strike the contested response.

Plaintiffs move to strike the contested response on the grounds that defendants had no right to file it. Rule 12(f) states that the court “may strike from a pleading an insufficient defense or any redundant, immaterial, impertinent, or scandalous matter.” Fed. R. Civ. P. 12(f). However, motions to strike are “generally viewed with disfavor because striking a portion of a pleading is a drastic remedy.” Waste Mgmt. Holdings, Inc. v. Gilmore, 252 F.3d 316, 347 (4th Cir. 2001). In addition, “district courts have the inherent authority to manage their dockets and courtrooms with a view toward the efficient and expedient resolution of cases.” Dietz v. Bouldin, 579 U.S. 40, 47 (2016).

At hearing, counsel for defendants quoted from Multilayer Stretch Cling Film Holdings, 831 F.3d at 1350, and the court asked counsel to confirm whether the quoted statement had been made in the context of claim construction. (See Tr. (DE 64) at 36-37). Counsel did not answer that question directly, but said that she “was going to check that for [the court] 100 percent,” in order to be sure. (Id.). Defendants submitted the contested response, which is about a page in length, the day after a preliminary transcript appeared on the docket. Where the contested response was submitted in response to a question posed by the court at hearing, and in fulfillment of counsel’s promise to the court to answer that question, striking the response is not appropriate in this instance.

Plaintiffs’ argument that the court allowed it at hearing to have “the last word” reads the court’s statement out of context. (Id. at 68). The court’s statement was made while setting a briefing schedule to address arguments “based on the Court’s acceptance as Plaintiffs’ Exhibit 1 United States Patent Number 10,683,607 B2 dated June 16, 2020[.]” (Tr. (DE 64) at 68). Plaintiffs did have the last word on that issue, which is not addressed in the contested response. Accordingly, plaintiffs’ motion is denied.

B. Claim Construction

1. General Principles

In Markman v. Westview Instruments, Inc., 52 F.3d 967 (Fed. Cir. 1995) (en banc), the Federal Circuit set forth the court’s role in determining as a matter of law the meaning and scope of patent claims, in the context of a patent infringement action, such as the one brought by plaintiffs here. Analysis of infringement involves two steps. “The first step is determining the meaning and scope of the patent claims asserted to be infringed.” Id. at 976.² “The second step is comparing

² Internal citations and quotation marks are omitted from all citations unless otherwise specified.

the properly construed claims to the device accused of infringing.” Id. It is the first step, “commonly known as claim construction or interpretation,” that is at issue in the present order. Id.

A patent is a written document in which an inventor makes “full disclosure of his invention to the [USPTO] and to the public,” for which, in return, the government confers “a property right to exclude anyone else from making, using, or selling the invention covered by [the patent] for seventeen years.” Id. at 985. A patent is comprised of a “specification,” which includes (1) a description and (2) claims. 35 U.S.C. §§ 111-112. These components are defined by statute:

(a) In general. – The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor or joint inventor of carrying out the invention.

(b) Conclusion. – The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.

35 U.S.C. § 112(a) & (b) (emphasis added).

The “two paragraphs of section 112 frame the issue of claim interpretation for [the court].” Phillips v. AWH Corp., 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc). “The second paragraph requires us to look to the language of the claims to determine what the applicant regards as his invention.” Id. “On the other hand, the first paragraph requires that the specification describe the invention set forth in the claims.” Id. A third component of a patent for claim construction purposes is the “prosecution history.” Markman, 52 F.3d at 980. Prosecution history is the “public record” of proceedings in the USPTO, which may include statements by the inventor, or on his behalf, while a patent application is pending approval. Id.

It is the court’s role in claim construction to “analyze the text of the patent and its associated public record and apply the established rules of construction, and in that way arrive at the true and

consistent scope of the patent owner's rights to be given legal effect.” Id. at 979. “It is a bedrock principle of patent law that the claims of a patent define the invention to which the patentee is entitled the right to exclude.” Phillips, 415 F.3d at 1312. Thus, the goal of claim construction is to determine the meaning of the claims. See id.

“To ascertain the meaning of claims,” the court must consider primarily the “intrinsic record,” comprised of “the claims, the specification, and the prosecution history.” Markman, 52 F.3d at 979; Phillips, 415 F.3d at 1313. Secondly, the court may consider “extrinsic evidence” in the form of expert testimony, technical information, and dictionaries. Id. The court will discuss in more detail these categories of evidence and their use in turn below.

a. Intrinsic Record

i. Claim terms

“[T]he words of a claim are generally given their ordinary and customary meaning.” Phillips, 415 F.3d at 1312. In turn, “the ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application.” Id. at 1313.

“[T]he context in which a term is used in the asserted claim can be highly instructive.” Id. at 1314. “[B]ecause claim terms are normally used consistently throughout the patent, the usage of a term in one claim can often illuminate the meaning of the same term in other claims.” Id. “Differences among claims can also be a useful guide in understanding the meaning of particular claim terms.” Id. “For example, the presence of a dependent claim that adds a particular limitation

gives rise to a presumption that the limitation in question is not present in the independent claim.” Id.³

ii. Specification

The claims “must be read in view of the specification, of which they are a part.” Id. at 1315. “[T]he specification is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.” Id. “It is therefore entirely appropriate for a court, when conducting claim construction, to rely heavily on the written description for guidance as to the meaning of the claims.” Id. at 1317.

There is, however, a “distinction between using the specification to interpret the meaning of a claim and importing limitations from the specification into the claim.” Id. at 1323. “For instance, although the specification often describes very specific embodiments of the invention, [the Federal Circuit has] repeatedly warned against confining the claims to those embodiments.” Id. “That is not just because section 112 of the Patent Act requires that the claims themselves set forth the limits of the patent grant, but also because persons of ordinary skill in the art rarely would confine their definitions of terms to the exact representations depicted in the embodiments.” Id.; see Markman, 52 F.3d at 980 (“The written description part of the specification itself does not delimit the right to exclude. That is the function and purpose of claims.”). Ultimately,

To avoid importing limitations from the specification into the claims, it is important to keep in mind that the purposes of the specification are to teach and enable those of skill in the art to make and use the invention and to provide a best mode for doing so. One of the best ways to teach a person of ordinary skill in the art how to make and use the invention is to provide an example of how to practice the invention in a particular case. Much of the time, upon reading the specification in that context, it will become clear whether the patentee is setting out specific examples of the invention to accomplish those goals, or whether the patentee instead intends for the claims and the embodiments in the specification to be strictly coextensive. The

³ A dependent claim is a claim that “contain[s] a reference to a claim previously set forth and then specif[ies] a further limitation of the subject matter claimed.” 35 U.S.C. § 112(d). By contrast, an independent claim does not incorporate by reference any claim previously set forth. See id. § 112(c).

manner in which the patentee uses a term within the specification and claims usually will make the distinction apparent.

Phillips, 415 F.3d at 1323.

iii. Prosecution History

“[T]he prosecution history can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be.” Id. at 1317. Nevertheless, although the prosecution history can and should be used to understand the language used in the claims, the court cannot “rely on the prosecution history to construe the meaning of the claim to be narrower than it would otherwise be unless a patentee limited or surrendered claim scope through a clear and unmistakable disavowal.” 3M Innovative Properties v. Tradegar Corp., 725 F.3d 1315, 1322 (Fed. Cir. 2013). “[T]he doctrine of prosecution disclaimer only applies to unambiguous disavowals.” Abbott Labs. v. Sandoz, Inc., 566 F.3d 1282, 1289 (Fed. Cir. 2009).

b. Extrinsic Evidence

“Although [the Federal Circuit has] emphasized the importance of intrinsic evidence in claim construction, [the court is] also authorized [] to rely on extrinsic evidence, which consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises.” Phillips, 415 F.3d at 1317. When the intrinsic record is “not inconsistent with” either party’s preferred construction, “it is appropriate for [the court] to look to dictionary definitions of the terms” or other extrinsic evidence to determine the terms’ meaning. Mass. Inst. of Tech. v. Abacus Software, 462 F.3d 1344, 1351 (Fed. Cir. 2006). However, where “extrinsic evidence may be less reliable than the intrinsic evidence,” the court

may not rely exclusively on extrinsic evidence “without sufficiently considering the intrinsic evidence in [the] case.” Vederi, LLC v. Google, Inc., 744 F.3d 1376, 1382 (Fed. Cir. 2014).

2. Analysis

In setting forth the court’s construction of claims in this case, for each disputed claim term, the court will first state the term in dispute, then the parties’ proposed constructions, and, finally, the court’s construction followed by an explanation of the construction decided upon.

- a. Disputed term – “A non-skid protective cloth or pad, consisting of”
 - i. Plaintiffs’ construction: A protective cloth or pad which does not slip or slide relative to a surface upon which it is placed, having at least a first protective layer and at least a second non-skid layer
 - ii. Defendants’ construction: A non-skid protective cloth or pad, limited to only two layers (a) and (b) and stitching (c)
 - iii. Court’s construction: A non-skid protective cloth or pad, limited to

This disputed term appears in claims 1 and 6. At hearing, it became apparent that the heart of the parties’ dispute centered on the term “consisting of” rather than “a non-skid protective cloth or pad,” accordingly, the court focuses its analysis on the term “consisting of.”

“The phrase ‘consisting of’ is a term of art in patent law,” Vehicular Technologies Corp. v. Titan Wheel Intern., Inc., 212 F.3d 1377, 1382 (Fed. Cir. 2000), “meaning that the claimed invention contains only what is expressly set forth in the claim.” Norian Corp. v. Stryker Corp., 363 F.3d 1321, 1331 (Fed. Cir. 2004). “Use of the transitional phrase ‘consisting of’ to set off a patent claim element creates a very strong presumption that that claim element is closed and therefore excludes any elements, steps, or ingredients not specified in the claim.” Multilayer Stretch Cling Film Holdings, Inc. v. Berry Plastics Corporation, 831 F.3d 1350, 1358 (Fed. Cir. 2016). In order “to overcome the exceptionally strong presumption that a claim term set off with ‘consisting of’ is closed to unrecited elements, the specification and prosecution history must unmistakably manifest an alternative meaning.” Id. While “it is not inconceivable that a patentee

could break with conventional claim construction and become his own lexicographer,” plaintiffs have not offered, and the court has not found, any case finding that a patentee had done so with respect to a term of art with an established meaning in patent law. Conoco, Inc. v. Energy & Environmental Intern., L.C., 460 F.3d 1349, 1359 n.4 (Fed. Cir. 2006). “[T]o be his own lexicographer, a patentee must use a special definition of the term that is clearly stated in the patent specification or file history.” Laryngeal Mask Co. Ltd. v. Ambu, 618 F.3d 1367, 1372 (Fed. Cir. 2010).

Here, clear evidence that plaintiffs intended “consisting of” to have a different meaning than that presumed in law is lacking. In support of their position, plaintiffs point to language from the specification stating that in “an alternate embodiment, a third layer, typically an impermeable layer 114 may be interposed between woven upper layer 102 and resilient layer 104,” (‘917 patent (DE 17-1) 6:59-61), as shown in the diagram below.

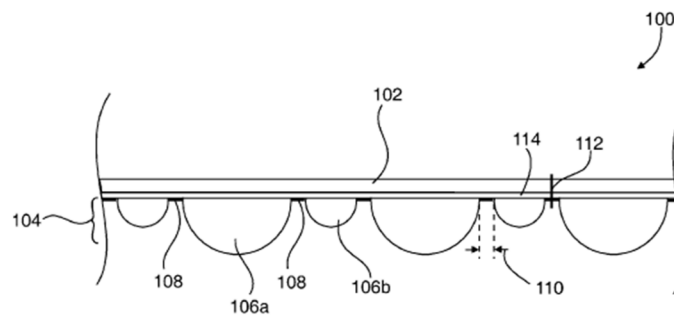


Figure 3

(Id. at Fig. 3). But throughout the rest of the specification, the invention is referred to as having two layers. See, e.g., (‘917 patent, abstract (DE 17-1 at 1)) (“A two-layer non-skid protective cloth or pad”); (id. at 3:64) (“The two layers are typically stitched together”); (id. at 5:24-25) (“Non-

skid protective cloth or pad . . . has two layers[.]”); cf. SkinMedica, Inc. v. Histogen Inc., 727 F.3d 1187 (Fed. Cir. 2013) (holding in the context of disclaimer that repeated use of a claim term “throughout the entire patent specification, in a manner consistent with only one meaning,” signals a patentee’s intent to depart from the ordinary meaning of a term). While a reading of the patent that is generous to plaintiffs would permit an inference that they have used the term “consisting of” in a way that is susceptible to more than one meaning, the specification does not “clearly manifest” a meaning of the term that is different from how it is ordinarily used. Multilayer Stretch Cling Film Holdings, Inc., 831 F.3d at 1358.

The prosecution history is similarly devoid of evidence clearly showing an intention to depart from the usual meaning of this term. Plaintiffs contend that because the examiner rejected previous versions of the patent as obvious in light of U.S. Patent No. 5,567,497, issued to Stephen A. Zegler et al., which teaches a three-layered floor covering with two layers fused together, the examiner understood the term “consisting of” to be open to more than two layers. (DE 43-7 at 123).⁴ First, where claim construction and obviousness are separate analyses, a finding that prior art renders a patent obvious does not necessarily bear on the meaning of any given term. See Celgene Corporation v. Peter, 931 F.3d 1342, 1350-53 (Fed. Cir. 2019). Second, the examiner stated plainly his understanding that plaintiffs “amended the preamble language of the claim by closing up the recitation and making it a two layered structure.” (DE 43-7 at 123). Plaintiffs did not address or correct the examiner’s understanding during the prosecution of the patent. Plaintiffs’ contention that the foregoing rejection shows that the term “consisting of” limits “the upper layer, and only the upper layer,” is without merit for the same reasons. In addition, claim 1 itself is formatted such that “consisting of” modifies elements (a), the upper layer, (b), the lower layer, and

⁴ Page numbers in citations to documents and briefs in the record specify the page number imposed by the court’s electronic filing system rather than the page number showing on the face of the document, if any.

(c), stitching. Thus, where plaintiffs have not “clearly set out [their] own definition . . . with reasonable clarity, deliberateness, and precision,” the court concludes that “consisting of” takes its usual meaning. Merck & Co. v. Teva Pharmaceuticals USA, Inc., 395 F.3d 1364, 1371 (Fed. Cir. 2005).

Finally, plaintiffs contend that an impervious layer such as the one in the accused product is “unrelated to the invention” such that the term “consisting of” does not exclude such a layer from the patent’s coverage. (DE 44 at 3). In so doing, they conflate improperly claim construction analysis (what the words of the patent mean) with infringement analysis (whether a patent covers a particular product). See Norian Corp., 363 F.3d at 1333 (finding that infringement was not avoided by addition a spatula to a kit consisting of specified chemicals where the spatula was “irrelevant to the invention”); Conoco, Inc., 460 F.3d at 1361 (upholding a district court’s finding of infringement, notwithstanding a limitation that a mixture consist of water or a water-alcohol mixture, where that impurity was added for tax reasons and had “little to no effect on the present invention”). While plaintiffs remain free to argue that defendants’ product infringes the ‘917 patent notwithstanding the addition of a third layer, those arguments are untimely at this stage.

b. Disputed term – “Adjacent”

- i. Plaintiffs’ construction: Lying near or close to, but not necessarily touching
- ii. Defendants’ construction: The upper major surface of the single lower resilient later is disposed directly next to or adjoins the lower major surface of the single, absorbent, woven upper layer
- iii. Court’s construction: Lying near or close to, but not necessarily touching

This term appears in claims 1 and 6. Primarily at issue is whether this term requires that the upper and lower layers physically touch each other.

Claims 1 and 6 both read, in relevant part, “[A] single lower, resilient layer having an upper and a lower major surface, said upper major surface of said single lower resilient layer being disposed adjacent said lower layer of said single, absorbent, woven upper layer[.]” (‘917 patent (DE 17-1) at 8:38-41, 9:8-11) (emphasis added). The specification states, “[i]n an alternate embodiment, a third layer, typically an impermeable layer . . . may be interposed between woven upper layer . . . and resilient layer[.]” (Id. at 6:59-61). As such, the patent contemplates that the two primary layers will not necessarily touch. The prosecution history also uses this language. (See, e.g., DE 43-6 at 168).

In response, defendants cite plaintiffs’ use of the word “adjacent” when distinguishing their invention from prior art. There, plaintiffs distinguished a prior invention which fused two adjacent layers together, saying, “[a]s used herein, the term ‘fusibly compatible’ when referring to two thermoplastics in adjacent layers means thermoplastics which can be permanently fused to one another under heat and pressure without any external attachment enhancer, such as a mechanical fastener or an adhesive.” (DE 40-1 at 75). But nothing in the specification indicates that the layers are intended to be fusibly compatible, indeed, the claims themselves indicate that the layers are attached mechanically by stitching. Defendants’ citations to this portion of the record are, therefore, of limited value.

Defendants also argue that where the term “consisting of” limits the invention to two layers and stitching, proper construction of the term “consisting of” requires that the two layers touch each other. This stretches claim construction beyond its proper role, where plaintiffs remain free to argue at a later stage of this case that an added additional layer is an aspect unrelated to the invention. See Norian Corp., 363 F.3d at 1332 (holding that infringement was not avoided by the

presence of an addition that was “irrelevant to the invention”). Accordingly, the claims, the specification, and the prosecution history all point toward plaintiffs’ construction.

- c. Disputed term – “Said downward projecting bumps comprising bumps having at least two different circumferential sizes”
 - i. Plaintiffs’ construction: Downward projecting bumps where each of the bumps has one of two or more different circumferences
 - ii. Defendants’ construction: The downward projecting bumps have a measurable boundary or perimeter of two or more sizes
 - iii. Court’s construction: Said downward projecting bumps comprising bumps having at least two different measurable boundaries or perimeters

This term appears in claims 1 and 6. Primarily at issue is whether the circumference of each bump must be measurable.

The claims repeatedly state that the circumferences of the bumps are “different,” (‘917 patent (DE 17-1) at 8:45, 8:48, 9:16), and that the circumferential size of one bump may be “smaller” or “larger” than that of another bump. (*Id.* at 8:47, 8:49, 9:18, 9:20). The specification additionally states that some bumps are “larger in circumference” than others. (*Id.* at 5:56). Where it is impossible to tell whether an object is larger or smaller than another object without measuring, the claims and specification support a requirement that the circumference of each bump be measurable in accordance with defendants’ proposed construction. At hearing, counsel for the plaintiffs suggested that in many cases, difference in circumference will be readily apparent by visual observation. (Tr. (DE 64) at 15). But this argument falls short where visual observation is itself a form of measurement, albeit an imprecise one.

The court cannot adopt defendants’ construction, however, where it omits the term “comprising,” which creates a presumption that “the claim does not exclude additional, unrecited elements,” without offering any support for that omission. Crystal Semiconductor Corp. v. TriTech Microelectronics Intern., Inc., 246 F.3d 1336, 1348 (Fed. Cir. 2001). In addition,

defendants' proposed construction introduces unnecessary ambiguity by alternating between the singular and the plural, again without support. Accordingly, the court adopts a construction which incorporates the requirement of measurability while preserving as much as possible the original grammar and language of the patent.

d. Disputed Term – Amorphous

- i. Plaintiffs' construction: Irregularly shaped
- ii. Defendants' construction: Having an indefinite shape, but a measurable boundary or perimeter
- iii. Court's construction: Irregularly shaped

This term appears in claims 4 and 9. Primarily at issue, again, is whether the perimeter of any irregularly shaped bump must be measurable.

Claim 4 reads, “[t]he non-skid protective cloth or pad as recited in claim 1, wherein said downward projecting bumps comprise a shape selected from the group: spherical, quasi-spherical, and amorphous.” (‘917 patent (DE 17-1) 8:64-67). Claim 9 uses the same language, but depends on claim 6 rather than claim 1. No specific reference is made to an amorphous shape’s boundary or perimeter, either in the claim itself or in the rest of the specification. Nor has the court or any party identified an example from the prosecution history in which the boundary of an amorphous shape was considered relevant to this claim. In fact, the intrinsic record barely discusses this term, and does little to illuminate its meaning.

As a result, both parties rely on dictionary definitions for the construction of this term. Courts may “rely on dictionary definitions when construing claim terms, so long as the dictionary definition does not contradict any definition found in or ascertained by a reading of the patent documents.” Phillips, 415 F.3d at 1322-23. Plaintiffs rely on the Oxford English Dictionary, which defines the term as, “having no definite shape or form, shapeless; unshaped[; a]lso:

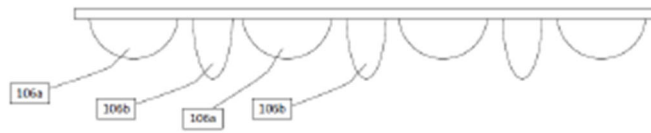
irregularly shaped, misshapen.”⁵ Defendants rely on the Merriam-Webster Collegiate Dictionary, which defines the term in relevant part as “a) having no definite form, b) being without definite character or nature, or c) lacking organization or unity.” (DE 40-7). But this definition does not support defendants’ suggested construction, which adds language referencing a boundary or perimeter that is largely irrelevant to the term at issue. None of these definitions reference a boundary or perimeter, and boundaries and perimeters are not linked to the term amorphous anywhere in the intrinsic record.

While the court has explained above that the requirement of a measurable boundary is embedded in claims 1 and 6, no support has been offered for its being relevant to this term. Accordingly, the court adopts plaintiffs’ proposed construction.

- e. Disputed Term – “Said height of bumps having the smaller of said at least two different circumferential sizes being greater than said height of bumps having said larger of said at least two circumferential sizes”
 - i. Plaintiffs’ construction: A first bump of a smaller circumference relative to a second bump of greater circumference has a height that is greater than the height of the second bump
 - ii. Defendants’ construction: Each of the circumferentially smaller bumps must have a greater height than that of the circumferentially larger bumps
 - iii. Court’s construction: Each of the circumferentially smaller bumps must have a greater height than that of the circumferentially larger bumps

This term appears in claims 1 and 6. The plain language of this claim describes bumps that are either skinny and tall (with smaller circumference and greater height), or fat and short (having a larger circumference and lower height) as pictured below.

⁵ See Amorphous, OXFORD ENGLISH DICTIONARY (3d. ed. 2023).



(Defs.’ Opening Br. (DE 40) at 17). Primarily at issue is whether all the bumps must follow this pattern, that is, whether any bump that is skinnier than another bump must also be taller than that bump. Defendants argue that the language of the claim requires this result. Plaintiffs argue that as long as any two bumps fit this pattern, all the rest of the bumps may diverge. The court agrees with defendants.

Though dense, the language is susceptible only to defendants’ interpretation. The parties agree that the language of the term describes the relative dimensions of certain bumps on the grippy surface, but disagree on the reach of the term, that is, how many bumps must fit this description. The parties agree that the language, the “height of bumps having the smaller of said at least two different circumferential sizes being greater than said height of bumps having said larger of at least two circumferential sizes,” describes skinny bumps that are taller than fat bumps. (‘917 patent (DE 17-1) 8:47-50). Plaintiffs, however, argue that as long as any one skinny bump is taller than any one fat bump, the claim language is met, while defendants argue that all bumps which are skinnier than a given bump must also be taller than that bump. Both the term’s use of the word “said,” which references an earlier phrase indicating that the term applies to each bump, and the term’s use of plural nouns, dictate this result.

The term begins, “said height of bumps having the smaller of said at least two different circumferential sizes.” (*Id.* 8:47-48) (emphasis added). “Said height” refers to the phrase immediately preceding the term, which reads, “said downward projecting bumps each having a height.” (‘917 patent (DE 17-1) 8:46-47) (emphasis added). The first “said” in the term thus carries

forward the effect of “each” to apply to the height of all bumps in the phrase. In plain language, then, the introductory phrase reads “the height of each bump with the smaller circumference.” Thus, the height of each bump with a smaller circumference is greater than the height of each bump with a larger circumference.

In addition, the term references a set of “bumps” in the plural, which share a singular “height” that is greater than the singular height of another set of bumps, again plural. (‘917 patent (DE 17-1) at 8:47-50). See also Baldwin Graphic Systems, Inc. v. Siebert, Inc., 512 F.3d 1338, 1342 (Fed. Cir. 2008) (“The subsequent use of . . . ‘said’ in a claim to refer back to the same claim term does not change the general plural rule, but simply reinvokes that non-singular meaning.”). Plaintiffs’ interpretation thus reads plurality out of the term, and is at odds with the directive from the United States Court of Appeals for the Federal Circuit to interpret claims “with an eye toward giving effect to all terms in the claim.” Bicoïn v. Straumann Co., 441 F.3d 945, 950 (Fed. Cir. 2006).

Part of the specification points in the opposite direction. When describing the preferred embodiment, the patent refers to the following illustrations, which are described as follows.

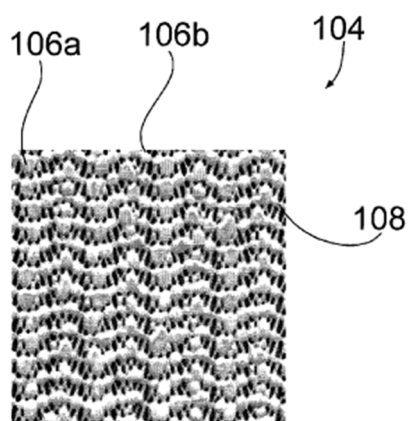


Figure 2

Referring now also to FIG. 2, lower resilient layer 104 has a plurality of downward-projecting bumps 106a, 106b. Bumps 106a are typically larger in circumference than bumps 106b.

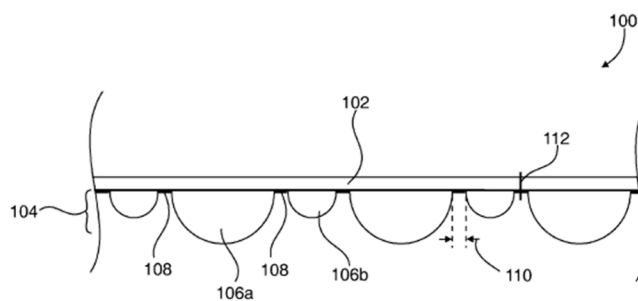


Figure 1

As shown in FIG. 1, larger bumps 106a are shown having a greater height than smaller bumps 106b. In alternate embodiments, larger and smaller bumps 106a and 106b, respectively, may have a substantially identical height. In still other embodiments, smaller bumps 106b may have a height larger than larger bumps 106a.

(‘917 patent (DE 17-1) 5:54-62) (emphasis added). Here, the first description is the opposite of what is described in the claims: fatter bumps are taller than their skinnier counterparts. A semi-spherical set of bumps such as those pictured in Figure 1, above, would fit this description. (Id. Fig. 1). However, only the configuration characterized as “still other embodiments” is actually described in the claims.

The answer to this conundrum lies in the prosecution history. “During prosecution, an applicant may have cancelled pending claims but not amended the specification to delete disclosure relevant only to the cancelled claims.” PSN Illinois, LLC v. Ivoclar Vivadent, Inc., 525 F.3d 1159, 1166 (Fed. Cir. 2008). “In such cases, unasserted or cancelled claims may provide ‘probative evidence’ that an embodiment is not within the scope of a claim.” Id. Such was the case here.

Plaintiffs added the term at issue December 26, 2014, in order to overcome rejections based on prior art. (DE 43-6 at 49). At that time, plaintiffs stated their view that there was “no recitation or suggestion of a lower surface configuration” similar to the updated term in the prior art. (Id.). The examiner agreed, stating that the prior art failed “to teach or suggest the limitation requiring that the ‘downward projecting bumps each having a height, said height of bumps having the smaller of said at least two different circumferential sizes being, greater than said height of bumps having said larger of said at least two circumferential sizes,’ in combination with the remaining limitations of the claims.” (Id. at 13). This was a departure from previous versions, which recited only the first half of what is now claim 1(b), “a single lower, resilient layer having an upper and a lower major surface, said upper major surface of said single lower resilient layer being disposed adjacent said lower layer of said single, absorbent, woven upper layer.”⁶ (Id. at 48). In addition,

⁶ The final patent retains this language.

a previous dependent claim recited that the “downward projecting bumps comprise bumps of at least two different heights.” (*Id.* at 175). But based on the record submitted to the court, no amendments to the specification appear to have been made at the time plaintiffs narrowed their claims. The contradictions in the specification thus are vestiges of plaintiffs’ original application, which do not reflect the narrowing necessary to obtain the patent. Accordingly, the court adopts defendants’ construction.

- f. Disputed Term – Whereby when tested in accordance with TAPPI T548 specification, an average slide angle is no less than approximately 40 degrees.
 - a. Plaintiffs’ construction: When tested in accordance with TAPPI T548, the claimed non-skid protective cloth or pad has an average slide angle of no less than approximately 40 degrees.
 - b. Defendants’ construction: Indefinite
 - c. Court’s construction: Whereby when tested in accordance with TAPPI T548, the claimed non-skid protective cloth or pad has an average slide angle of no less than approximately 40 degrees.

This term appears in claim 6. Defendants argue that this term is indefinite. The court disagrees.

A “patent’s claims, viewed in light of the specification and prosecution history, [must] inform those skilled in the art about the scope of the invention with reasonable certainty.” Nautilus, Inc. v. Biosig Instruments, Inc., 572 U.S. 898, 910 (2014). The requirement of definiteness “mandates clarity, while recognizing that absolute precision is unattainable.” *Id.* Patentees ordinarily may rely on published industry standards if “the record shows that a person of ordinary skill in the art . . . would follow standard industry guidance.” Wellman, Inc. v. Eastman Chemical Co., 642 F.3d 1355, 1367 (Fed. Cir. 2011). When there are “disputes between the parties as to the proper application of the test methodology in the circumstances of an individual case,” those disputes are “about whether there is infringement, not . . . about whether the patent claims are

indefinite.” Presido Components, Inc. v. American Technical Ceramics Corp., 875 F.3d 1369, 1377 (Fed. Cir. 2017). “[A]ny fact critical to a holding on indefiniteness must be proven by the challenger by clear and convincing evidence.” One-E-Way, Inc. v. International Trade Comm’n, 859 F.3d 1059, 1062 (Fed. Cir. 2017).

TAPPI 548 (“the test”) is a procedure for measuring friction using the device pictured below.⁷

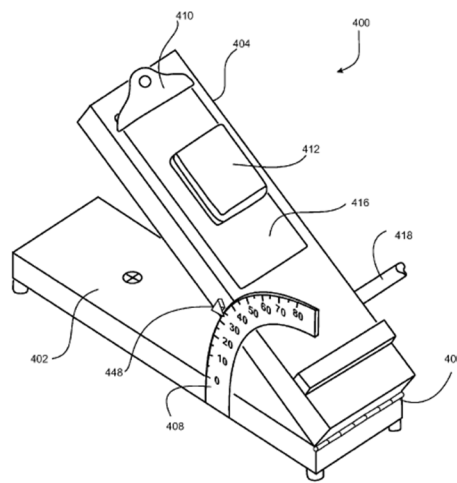


Fig. 4

(‘917 patent (DE 117-1) at 5). The tester puts two samples of the object to be measured atop a plane, which can be raised or lowered. The bottom sample is clamped to the plane clipboard-style (410) and the other is usually attached to a block called a sled (412). The tester starts with the device folded flat, then gradually raises the upper plane until the block and attached sample move. The angle at which the upper plane is positioned when the sample moves is called the slide angle.

⁷ The description in this paragraph is provided only for context and has been simplified for readability. Neither party should use this description in support of any argument advancing a particular method of conducting the test.

The tangent of that angle, the coefficient of static friction, represents the ratio of the frictional force resisting movement to normal force.⁸

Defendants argue it is impossible for a person skilled in the art to know how a test procedure designed to measure coefficients of friction for paper apply to the patent in suit. They claim that plaintiffs have failed to describe how a test procedure for paper would apply to a cloth mat, what the support surface should be, the process for using the inclined plane, the rate of incline to be used, and whether a sled is required. However, all these are disclosed in the specification or in the procedure itself. The specification describes a process by which a piece of the drop cloth is clamped to an inclinable plane, a second sample is placed on the “upper surface of the sample of the first material,” and the inclinable plane is raised until the top sample slides down. (‘917 patent (DE 17-1) 7:14-26). The specification also states that tests were done “on a laminate flooring sample,” which “was estimated to represent the most ‘slippery’ surface upon which a painter’s drop cloth might be utilized.” (Id. 9:53-55). The test itself sets forth a detailed procedure, describing inter alia how large the specimens should be, which specimen should be placed on top, where to place the sled, and how many measurements to take. (See DE 40-3 at 4). The test also indicates that the rate of incline should be 1.5 ± 0.5 per second. (See id. at 4). Finally, the test specifies that a sled, “a 63.5 x 63.5 . . . mm block with a rubber faced lower surface weighing a total of 200g” ideally should be used, (id. at 3), and figure 4 in the patent depicts such a sled. (‘917 patent (DE 17-1) at fig. 4).

Defendants argue that a person skilled in the relevant art should not have “to look at the specification to fill in the details” of the claims, and that such a requirement improperly would

⁸ Normal force is equal and opposite to weight in this context; it is the amount of upward force exerted on the sample by the test apparatus. This, incidentally, is part of the reason the existence of a sled and the weight thereof are both important.

read limitations from the specification into the claims. (DE 40 at 22). On the contrary, the Supreme Court has held that those skilled in the art are required to read claims “in light of the specification delineating the patent” before their counsel may credibly argue indefiniteness. Nautilus, Inc., 572 U.S. at 901. And since then, the Federal Circuit has read the specification closely when determining whether a person of skill in the art would know how to utilize a measurement method prescribed therein. Ethicon Endo-Surgery, Inc. v. Covidien, Inc., 796 F.3d 1312, 1321 (Fed. Cir. 2015) (“[T]he specification clearly discloses that the claimed . . . pressures are average pressures on tissue disposed between the tissue pad and blade, and . . . is sufficient to inform skilled artisans as to where these average pressures should be measured.”) (emphasis added). Reference to the specification for illumination of a testing method prescribed in the claims therefore is proper. Accordingly, defendants have not proven this term to be indefinite.

- g. Disputed Term – Whereby when said lower major surface of said single resilient layer is placed on a support surface, a Sliding Coefficient of friction measure in accordance with TAPPI T548 specification is greater than approximately 0.75.
 - i. Plaintiffs’ construction: when tested in accordance with TAPPI T548, the claimed non-skid protective cloth or pad has a sliding coefficient of greater than approximately 0.75.
 - ii. Defendants’ construction: Indefinite
 - iii. Court’s construction: Indefinite

This term appears in claim 1, and defendants contend that it, too, is indefinite. Here, the court agrees.

The primary problem with this term is that it instructs a person of ordinary skill in the art to use the test to determine a variable that it is not designed to measure, somewhat like determining temperature with a ruler. The test measures static coefficient of friction, or how much force it takes to get the drop cloth moving, (DE 40-3 at 1), while the term at issue instructs the reader to measure a sliding coefficient of friction, or how much force must be applied to a drop cloth that is

already moving in order to keep it travelling at the same speed. (‘917 patent (DE 17-1) at 8:55). The specification likewise conflicts with the term, referring repeatedly to a static coefficient of friction. (Id. 8:40, 44-45, 51-52 63).

Counsel for the plaintiffs never addressed this conflict, despite its being raised by the court at hearing. (See Tr. (DE 64) at 59) (“[H]ow do you deal with the fact that the test measures a static coefficient of friction?”).⁹ This is not simply a dispute over the proper way to perform the test, see Presido Components, 875 F.3d at 1377, but a test that does not describe a way to produce the variable contemplated in the claim. In the absence of any argument on this point by plaintiffs, the court cannot conclude that a person skilled in the relevant art would follow the guidance offered by plaintiffs to measure a sliding coefficient of friction. Accordingly, the term is indefinite.

C. Case Schedule

In accord with section B(4) of this court’s June 9, 2023, order where the court pronounced that at this juncture in the case, having determined now the controlling constructions, it “will enter such further order as is warranted regarding the scheduling of an additional period of discovery and/or initial dispositive motions,” (DE 32 at 7), the parties are directed to file by May 10, 2024, their joint report and plan proposing deadlines for: a) any additional discovery that may be necessary, and which discovery activity or activities, and limits thereon, shall be described; and b) filing of dispositive motions (take note pursuant to terms of the case management order, deadline for filing any motion to exclude expert testimony is the deadline for filing dispositive motions).¹⁰

⁹ While plaintiffs submitted a patent by defendants that incorporates TAPPI 548 pm-90 (see DE 62-1), that patent is not responsive to this problem where it relies primarily on another protocol, which measures both static and kinetic friction.

¹⁰ Having reviewed relevant materials in the record and separately made available to this court, the court finds that informal conference by telephone requested by defendants April 12, 2024, pursuant to the court’s case management order (DE 32), is unlikely to aid in resolution of disputed issues in discovery. In this instance, the court dispenses with conference requirement. The parties shall endeavor in conference to address issues concerning, and if

Said report and plan shall make mention of whether and when there may be utility in further settlement activities. The parties also are encouraged to report on any particular issue(s) bearing on the case schedule not otherwise described.

CONCLUSION

For reasons given, plaintiffs' motion to strike (DE 66) is DENIED. The court has CONSTRUED the disputed claim terms and for summary purposes sets forth below those constructions:

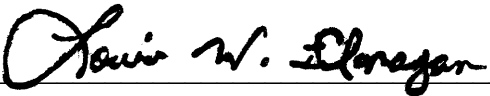
A non-skid protective cloth or pad, consisting of	A non-skid protective cloth or pad, limited to
Adjacent	Lying near or close to, but not necessarily touching
Said downward projecting bumps comprising bumps having at least two different circumferential sizes	Said downward projecting bumps comprising bumps having at least two different measurable boundaries or perimeters
Amorphous	Irregularly shaped
Said height of bumps having the smaller of said at least two different circumferential sizes being greater than said height of bumps having said larger of said at least two circumferential sizes	Each of the circumferentially smaller bumps must have a greater height than that of the circumferentially larger bumps
Whereby when tested in accordance with TAPPI T548 specification, an average slide angle is no less than approximately 40 degrees.	Whereby when tested in accordance with TAPPI T548, the claimed non-skid protective cloth or pad has an average slide angle of no less than approximately 40 degrees.

defendants remain dissatisfied, they may file the appropriate motion. In that event, the joint report and plan made mention of above shall include deadline for filing of any such motion and an agreed upon briefing schedule.

Whereby when said lower major surface of said Indefinite
single resilient layer is placed on a support
surface, a Sliding Coefficient of friction measure
in accordance with TAPPI T548 specification is
greater than approximately 0.75.

With regard to further case scheduling, the parties are directed to file by May 10, 2024,
their joint report and plan as set forth above. And if either side thinks court conference with the
parties before entry of further order on scheduling would be helpful, request for conference may
be included in the report.

SO ORDERED, this the 29th day of April, 2024.



LOUISE W. FLANAGAN
United States District Judge